Meaningful Learning Journal

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Abstract

This journal aims to examine the impact of a Technological Enhanced Learning Environment (TELE) on an individual's learning experience. The case study approach is utilized to explore the participant's perspective and understanding of the TELE in question, as well as its relationship to current theories of learning and motivation. The findings of this journal provide insight into the potential benefits and limitations of TELEs as a tool for enhancing the learning process. Future research is needed to further investigate the effectiveness of TELEs in different contexts and for diverse populations. The following journal will examine a positive previous instance that I have obtained during my time in education and attempt to examine why that is and the theory behind it.

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Entry 1: Describe your own meaningful learning experience

My most significant and influential educational moment occurred when I took my first computer subject in secondary school at the age of 11 (2011). I've always been fascinated by computers, and I'm frequently devoted to engaging in gaming and navigating different software programmes, but I've never truly comprehended how they operate. I was interested in their components and what made a computer or device function as it did. The most memorable moment occured when our teacher removed the computer's case, revealing its inner workings for the first time. I felt awe and astonishment as I observed the intricate and complex architecture of circuits, processors, and wires. It was as if an entirely new world had been revealed to me.

Our teacher described the numerous components of a computer, even demonstrating the significance of each component to the overall function and efficacy of the computer. My curiosity and interest grew stronger with each new piece of information. I was mesmerized by the delicate balance and synergy between hardware and software, and how they worked together to create something so versatile and potent. As the class developed, I found my beliefs avidly changing with every class and assimilating as much information as possible. I came to comprehend the computer language, the logic behind coding, and the significance of preserving and upgrading parts to increase performance. This experience not only heightened my appreciation for technology, but also ignited a lifelong passion for it as well.

Looking back, I am grateful that the computer case was removed at that crucial juncture. It was the impetus that encouraged me to delve deeper into the realm of computing, ultimately leading me to pursue a degree in the field. It taught me the significance of cultivating one's curiosity and pursuing knowledge in areas that spark our inclinations. This experience will always serve as a reminder of how pursuit for the unknown and delving into curiosity, can impact the future prospects of individuals, as shown by myself.

Entry 2: Assumptions About Learning

Dwelling on the first entry, I now understand that there are a number of implicit and explicit assumptions that can be made regarding how individuals learn. Whether we recognise them or not, these assumptions can influence our learning experiences and our approach to acquiring new knowledge.

Initially it ought to be stated that, similar to my own experience, our desire to learn is fueled by curiosity. When something piques your interest or ignites our imagination, we are more likely to engage with it and investigate it thoroughly. Whilst bias to my particular situation, this is something that has closely aligned to my experience within the first entry. Even then, the computer course was only the beginning within my understanding of the field, learning is a process that persists throughout our lives, as we continually strive to increase our knowledge and develop as individuals. Therefore in this way, it could be said that individuals have distinct ways of learning. What is a pivotal learning experience for one person may not carry the same weight for another. This makes me hold the assumption that our learning journey is influenced by our interests, origins, and experiences.

This experience also shed light on the assumption between passion and learning. There is an innate feeling that when we hold a passion for a subject, our ability to learn about it improves greatly. When we are genuinely impassioned about something, we are more likely to invest time and effort in learning about it, and we are also more likely to retain and implement the knowledge we acquire.

Last but not least, being able to see the interior workings of a computer with my own eyes constitutes a memorable direct experience. These encounters can leave enduring impressions, thereby enhancing our comprehension of the topic.

Entry 3: Theories of Learning

As observed from my perspective of education & learning shown within the two entries above, it could be said there is a combination of the 3 primary respective learning theories in education. The first strong connection of learning theories is that of a constructivist approach. I find that my active engagement in the learning process, by asking questions to deepen my comprehension, and the process of beginning to think critically about specific cases such as the hardware and software components and their interactions, are both constructive beliefs. In addition, my passion for computers and natural curiosity significantly shaped my learning experience. This is consistent with the constructivist belief that learning is a personal process and that individuals construct their knowledge according to their distinct interests and experiences. Lastly, the computer class provided a collaborative learning environment in which I was able to interact with my teacher and classmates. Not only did these interactions facilitate the exchange of ideas and information, but they also assisted me in refining my comprehension and gaining new perspectives through mistakes I had previously made, or concepts I had misunderstood.

The behaviorist approach could also be considered based on my positive experiences and the delight I derived from using and interacting with computers served as further reinforcement (Pavlov's dog), encouraging me to study them further. As my knowledge and comprehension of computing grew, this encouragement encouraged me to continue learning and investigating the subject. A specific instance of this could be from something as simple as learning where components in a computer go, e.g., learning where to place RAM, connect a hard-drive and so on.

Finally, cognitivism is also addressed through My growth of problem-solving abilities. As I gained an understanding of the logic behind programming and the significance of maintaining and upgrading components, I began to apply these skills to real-world issues and optimize computer performance. This also took the form of metacognition, as I became more conscious of my thought processes, learning strategies, and enhancement areas. This self-awareness allowed me to refine my comprehension of computing over time by adapting my

learning strategy. Lastly, my natural curiosity and enthusiasm for technology played a significant role in my educational journey. These factors affected my attention and perception, allowing me to concentrate on the presented information and filter out irrelevant stimuli, which facilitated more efficient learning. But this last point allows the same suitability as a constructivist approach, leading me to conclude that constructivist and behaviorist approaches were the most influential in my education, despite the fact that cognitivism and constructivism may be interrelated.

Entry 4: Theories of Motivation

As I reflect on my high school learning experience with technology, I am able to identify connections to the Lepper and Malone paradigm of intrinsic motivation. This model highlights the significance of challenge, curiosity, and control in motivating individuals. Therefore, in terms of difficulty, it piqued my interest and inspired me to learn. The assignments were sufficiently challenging to be intriguing while remaining within my capabilities, providing an optimal level of difficulty. For instance, the skill of disassembling and reassembling a computer with precision. This equilibrium inspired me to challenge myself and surmount any obstacles I encountered, which ultimately led to a deeper comprehension of the topic. Curiosity also played a role in my learning motivation. As stated previously, this curiosity, fuelled by my enthusiasm for using and tinkering with computers, compelled me to investigate the inner workings of these devices and comprehend how they operated. This curiosity was satisfied by the computer class, which allowed me to delve deeper into the subject and develop a comprehensive understanding of computing.

Other models like that of the ARCS **(Attention,Relevance, Confidence, Satisfaction)**, could also come into play with my personal experience. My **Attention** (one of its attributes) through various methods, such as when the computer casing was removed in front of me, unveiling the interior components, which I had never seen before. In addition, the instructor's kept me attentive and interested in the material. In addition to this, the subject matter of the computer class was highly pertinent to my personal interests. This **relevance** inspired me to learn more about computers by allowing me to relate the new information to my prior experiences and interests. My conviction/**confidence** in my capacity to comprehend and utilize technology increased. I developed a sense of self-efficacy as a result of the support and guidance I received and my active participation in the learning process. This assurance encouraged me to continue my education, accept new challenges, and delve deeper into the topic. In turn, this enabled me to experience **satisfaction** during the learning process. As I completed tasks, such as assembling or disassembling a computer or solving programming problems, I felt a sense of accomplishment and pride in my accomplishments, which strengthened my desire to learn.

Entry 5: From Real to Digital

As I consider my meaningful learning experience with computers in high school, which took place in a face-to-face setting, I recognise the significance of translating the valuable aspects of this experience into the digital domain. As technology continues to advance and transform education, it is essential to design technology-enhanced learning experiences that not only engage and motivate students, but also preserve the essence of what makes learning significant. Identifying the main factors that contributed to my engagement and motivation, followed by an explanation of the conversion to a digital aspect, will accomplish this.

The hands-on, practical approach allowed me to directly implement my knowledge and deepen my understanding of the topic. This can be replicated in a digital environment through augmented reality (e.g., allowing users to explore the inner workings of a device in an interactable 3D Model, using their smartphones/computers) or interactive simulations that provide learners with opportunities to experiment and troubleshoot concepts in an engaging manner. Furthermore, this digital environment can provide learners with flexibility in terms of scheduling, content selection, and learning paths, thereby empowering them to take charge of their educational journey, coming back to the idea of a constructivist attitude to learning .

The experience I had with my teacher's assistance and direction were instrumental in developing my confidence and skill. Incorporating personalized feedback and guidance, either through adaptive learning algorithms or an automated response system, can help maintain a comparable level of support in a digital learning environment (e.g. a learning smartphone app). Furthermore, this also fostered a sense of belonging. Incorporating communication tools, such as discussion forums, video conferencing, or collaborative project platforms, that encourage learners to engage with one another and share their knowledge and perspectives can facilitate this in digital learning environments.

It is essential, when designing technology-enhanced learning experiences, to avoid the simple replication of traditional methods and instead focus on conveying the essence of meaningful learning. By meticulously contemplating the factors that contributed to my own engagement and motivation, I can design digital learning experiences that not only inspire and motivate students, but also cultivate meaningful, long-lasting comprehension and personal development.